VR Research Casino

Game Concept: Virtual Reality Slot Machine.

Target Platform: HTC VIVE/Oculus.

Mechanics:

- The User must put in a token to start the slot machine.
- To use the machine, the user pulls the handle/ press the button.

Project Summary

- Goal: Developing a Virtual Reality(VR) system to model a casino like environment.
- Why: Using the VR environment we can model human behaviour based off financial risk.
- Some examples of similar VR projects related to casino games are shared later.

What do we plan on doing?

- Developing “mini-games”, e.g: A slot machine, we will create a VR environment.

- The environment will be mutable, meaning we can change based off certain inputs given by a user.

- Changes to the environment can include, but not limited to the following:
  - Music/Sound.
  - Color .
  - Depth Perception(Placement of slot machine within environment).
  - Financial risk amount.

Why did we plan to do so?

- The users of the system will “gamble” in the environment, based off financial incentives/risks.
- Changing the environment displays how financial risks/investments change based off VR environmental factors.
- Environmental changes and how they can alter human perception:
  - Music/sound: how does audible feedback to the user alter his behaviour and or financial risk taken.
  - Color: How does the visual feedback given or any change in visual perception alter the humans behaviour in the environment.
  - Depth perception: similar to above how does the visual depth/size of the environment or mini-games make humans alter their behaviour.

Example: Slot Machine in VR

- A slot machine in VR environment.
- This example shows detailed background. Which could also be dynamic.
- By **AppReal-VR Studio**. https://www.youtube.com/watch?v=n5ca4OL8M5g

Example: Many games

- A VR environment with several different casino games.
- User could interact with different machines in the room.
- By **Tania Davis**. https://www.webpokie.com/free-or-real-vr-pokies-and-casino-slot-games-quick-start-guide/

Example: Interface and Menu

- An interface and menu example of a slot machine in VR.
- By **ME2ON VR**. https://www.oculus.com/experiences/gear-vr/2247877368571344/

Example: Visual Feedback

- An example of visual feedback that a user can experience.
- We can introduce such feedback to see changes in user behaviour and financial decision making.
- By **ME2ON VR**. https://www.oculus.com/experiences/gear-vr/2247877368571344/

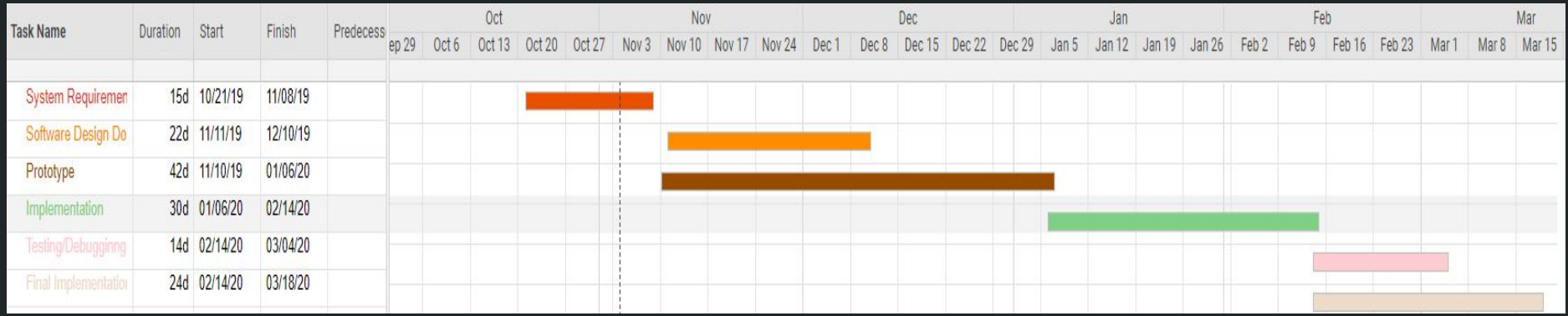
Example: Visual Feedback

- An example of visual feedback when user wins a game.
- We can modify the visual feedback from victories to see the impact of the players decision to continue playing.
- By **ME2ON VR**. https://www.oculus.com/experiences/gear-vr/2247877

Deliverables?

- **Build:** We will use C# and Unity to create our models/environment.
- **Data Output:** Two excel data files generated :
  - **Per Second and/or per frame data** : Includes timestamp, participant position, actions and environment parameters
  - **Summary data:** An overview list of actions/choices and when they were taken. Also includes participant earnings
- **Database system:** Depending on what data is needed to be stored we can use a Relational Database Management System(RDMS) to store user info/input/results.

Implementation - Gantt Chart



- System Requirements: October 21 - November 10.
- Software: Design Document: November 11 - Beginning of December.
- Prototype: Beginning of December - Beginning of January.
- Implementation: Beginning of January - Early to Mid February.
- Testing and Debugging: Beginning of February-Early March.
- Final Implementation: March 20th.

Thank You

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